Technology Deployment Initiative Problem Statement
Request for Funding
FY2004

FHWA Strategic Goal Area:
Mobililty, Productivity

FLH Technology Strategy:
Advance new materials, design concepts, and innovative practices that could significantly improve durability, longevity, and reliability.

Project Title:
Innovative Contracting Manual of Practice for Federal Lands Highway

Problem Statement:
Each year the traveling public demands an increased focus on strategies to minimize impacts to highway users during construction. As our focus increases on mobility, a key element encouraging innovation and timeliness is the collection of an arsenal of contracting processes. Federal Lands Highway (FLH) has experimented with some innovative contracting methods. However, clear understanding of the purpose and benefit, criteria for project selection, and the contract requirements of select methods is not adequately documented or addressed. This lack of implementation guidance does not enable delivery staff to routinely analyze the contracting method to reduce construction impacts on their project. Much of the FLH knowledge has been gained through on the job experience. As a result, new staff and consultants have incomplete knowledge and guidance, and many times inexperience results in an engineer recommending the standard design-bid-build process.

Background:
Innovative contracting differs from conventional contracting by the use of incentives to motivate contractors to provide quality transportation facilities while minimizing travel delays and maintaining a competitive bidding process. Leading State DOTs and other agencies use a variety of contracting methods to mitigate construction impacts on the traveling public. FLH primarily uses a design-bid-build process with set completion dates and traditional owner-oversight of all key decisions, materials, and specifications. FLH contracting methods have been sound and have served the Federal Land Management Agencies well in most instances. As the FLH program grows, environmental restriction increase, and visitor usage of public lands rise, innovative contracting provides opportunities to meet demands on time sensitive projects where the public is impacted.

Benefits:

Innovative practices in construction contract administration can yield more cost-effective ways of designing and building safer roads and bridges in shorter periods and with less inconvenience to those using the facilities as well as those affected by the construction. The guidance developed will enable project delivery staff to incorporate innovative contracting methods where applicable to achieve FLH goals. A primary objective is to increase the knowledge of the FLH delivery staff. By developing this manual, it is intended that the results will become policy and technical guidance for designers and construction staff in all FLH divisions and a resource for our FLMA partners.

Scope:
The deliverable will be a manual of innovative contracting methods establishing the state of the practice for designing and constructing transportation projects. The manual will address the effectiveness of each contracting method, the method's potential impact on quality, the comparison of cost to benefit, the development of contract provisions for implementation, and an explanation of the FLH contracting process for each method. The content would include an introduction to the innovative contracting methods including but not limited to work day contracts, incentive/disincentive contracts, lump sum incentive contracts, liquidated savings contracts, competitive-negotiated contracts, design-build contracts, A+B contracts, lane rental, warranty contracts, and value engineering.

Specific deliverable found in the manual will include

- A matrix of contracting methods versus project types to indicate at a quick glance where innovative contracts would be appropriate to achieve the desired delivery;
- A critical analysis process to determine if a matrix suggested contracting method is truly appropriate for the specific project;
- A process to incorporate the selected contracting method into FLH plans and specifications;
- Example special contract provisions for each type of contracting method;
- A feedback loop to incorporate acceptable VE proposals into the FLH standard drawings and plans; and
- Best practices for combining several innovative contracting methods.

Deployment Method:
The primary deliverables of this initiative is the innovative contracting manual. Successful implementation of these methods will depend on 1) thorough dissemination of the manual to FLH staff, 2) presentations to staff and other interested user groups to discuss the methodologies and answer questions, and 3) inclusion of specifications in the next Federal Project Standard Specifications.

The audience beyond Federal Lands for this manual includes practitioners who construct roadways, such as DOT engineers, government agencies, and engineering consultants. The Technology Deployment team can use a variety of communication "tools" - such as technical briefs, presentations, and the Federal Lands Web site - to acquaint other potential user groups.

Estimated Costs:
The estimated cost of this proposal including deployment is $145,000.

Duration:

For purposes of the study proposal, the following time requirements are estimated.

Draft Manual	Summer 2005
Final Manual	Fall 2005
Presentation to FLH Staff	Spring 2006

Champions:
Champion for this initiative will be Ricardo Suarez.

A technical review team representing all FLH divisions will be composed of contracting, project delivery, construction, and legal staff.